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Outdoors

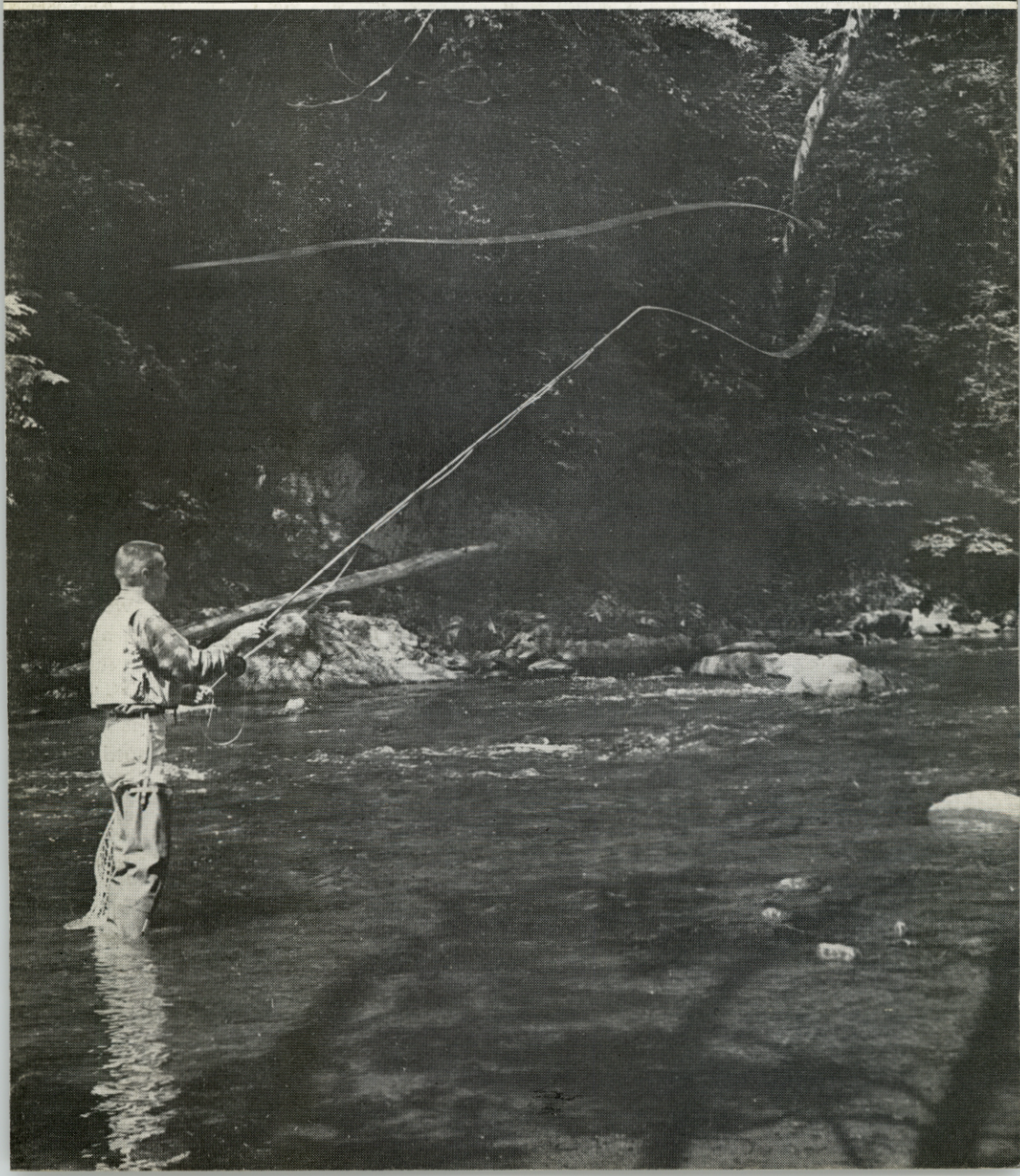


P.B

VOL. 11, NO. 11

DIVISION OF FISH AND GAME

MAY, 1961



The GREEN ACRES Program

HOWARD WOLF

Principal Planner, State Planning Bureau

AS FAR AS sportsmen are concerned, one of the most encouraging pieces of legislation to come out of the 1961 spring Session of the legislature is in the form of the companion acts for the Green Acres Program. On March 27, the acts were introduced as Assembly Bills 540 and 541.

The State's need for additional outdoor areas was set forth in both Governor Meyner's Seventh Annual Message and his Budget Message. The Green Acres Program, introduced at the request of the Governor, carries out the specific recommendations contained in those messages. The Green Acres Program makes possible the immediate acquisition of open lands for parks, hunting, fishing, wildlife, and other recreation and conservation purposes before such lands are irretrievably lost as the result of continuing development or sky-rocketing prices.

Assembly Bill 540 establishes standards of acquisition and specifies in detail the manner in which the proceeds of the sale of the bonds would be allocated. \$45,000,000 would be allocated for acquiring State outdoor areas and \$15,000,000 would be allocated for the acquisition of park lands by counties and municipalities. Fifty percent of the cost of park lands acquired by local units would be paid by the State and the remaining fifty percent would be paid by the municipality or county.

Assembly Bill 541 provides for the submission to the people at a general election this November a proposition authorizing the sale of \$60,000,000 of State bonds to permit the immediate acquisition of the necessary lands. The Bill also establishes a special account into which fees paid for the use of State recreational facilities and revenue derived from the tax collected under the provision of the existing Corporation Business Tax Act (1945) would be set aside and from which the principal and interest on the bonds would be paid.

The bills contain safeguards to assure that lands acquired are suitable for the purposes intended and are used for such purposes. They constitute recognition by the Legislature of the urgency of today's crisis in outdoor recreation and that the well-being of the State's population requires the preservation of New Jersey's fast disappearing lands suitable for outdoor recreation.

Every resident of New Jersey interested in the out-of-doors should support the Green Acres Program. Additional information on the Green Acres Program can be had by writing to Public Information Office, Department of Conservation and Economic Development, 205 West State Street, Trenton 25, New Jersey.

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Cover—"FLY FISHING TIME"—Staff Photograph
The best fly fishing of the trout season may
be enjoyed during the next few weeks

Editor: **Bob Adams**

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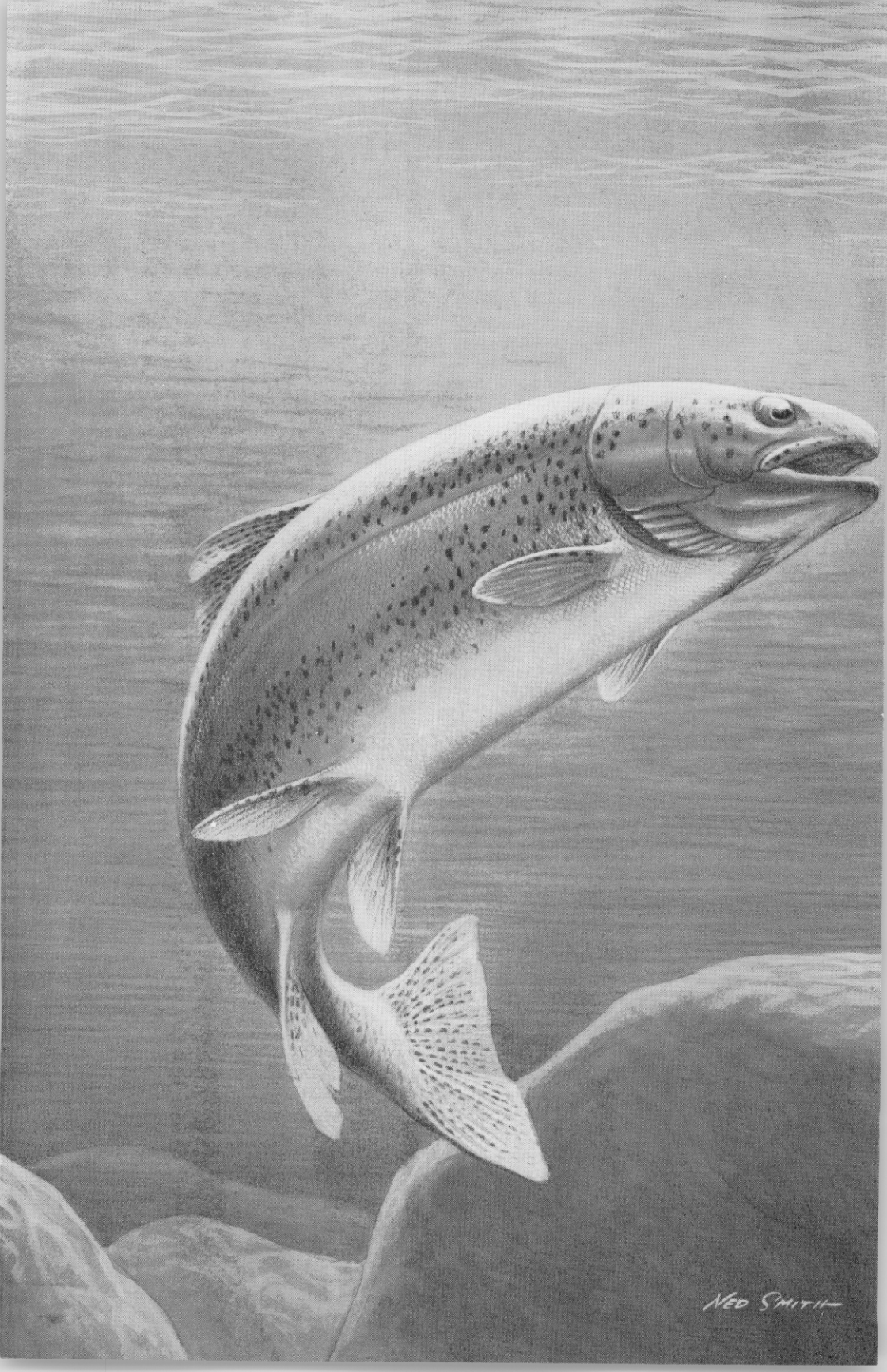
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NED SMITH

Some notes of interest to anglers on the

RAINBOW TROUT

New Jersey's Western Cousin

By HARRY GOODWIN

THE RAINBOW TROUT is New Jersey's welcome cousin from the West. It is actually a native of the cool waters of the Pacific slope of western North America. The rainbow is now found in our state through the efforts of early and present fish culturists.

The rainbow trout in keeping with its wide distribution, has been bestowed with a number of names including the following: steelhead, coast rainbow trout, hardhead, coaster, Coast Range trout, Pacific trout, salmon trout, California trout, steelhead salmon, Columbia River steelhead, and red-sides. The true steelhead (the sea run form) is actually the same species as the rainbow trout; both are *Salmo gairdneri* to ichthyologists.

Description

The adult rainbow trout is in general silvery or iridescent with a more or less conspicuous red, pink, or purplish stripe along the sides. Fresh sea run or large-lake rainbows are usually very silvery and with only a hint of the red stripe.

Sharp, black spots, never red speckles, are present in varying

abundance on the lighter background of the head, back and sides, as well as the dorsal and caudal fins. As a matter of fact, the black spots on the tail fin are one of the most distinguishing characteristics of the rainbow trout in New Jersey.

The lower fins are plain and not edged with white as are those of the brook trout. The adipose fin is bluish to greenish in color. The scales, while relatively fine, are easily seen and readily rub off in quantity, especially with silvery specimens.

Dark, deep pools and beaver ponds often yield rainbow trout that are so dark as to appear to be melanistic. This black phase results as a response to environmental conditions rather than from genetic influences. After spawning even the steelhead loses much of its silvery paleness and takes on the appearance of stream fish.

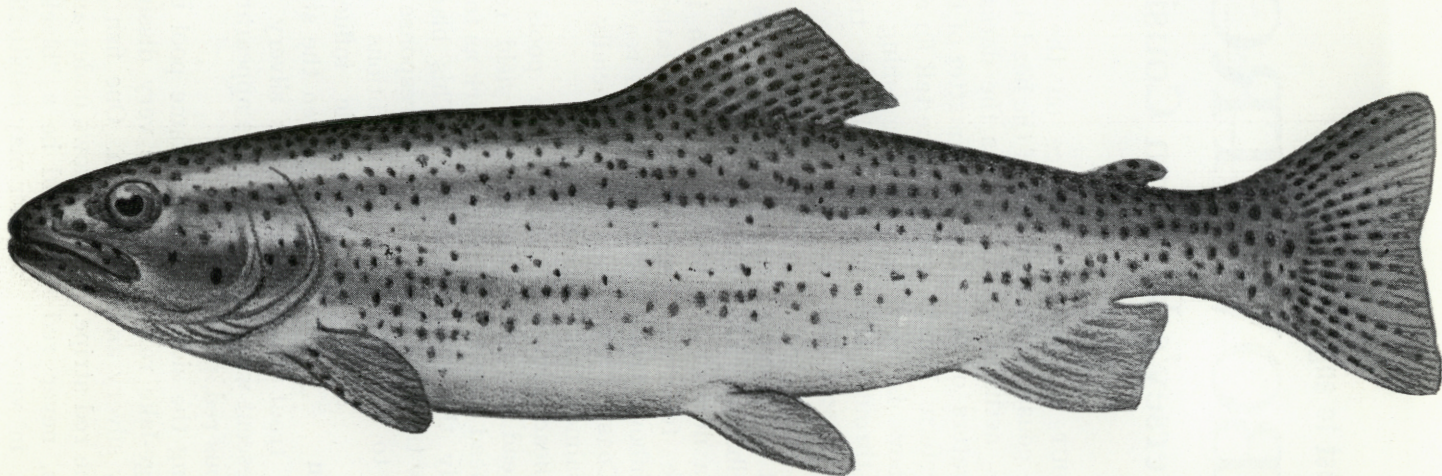
In the same pool two rainbows may have very dissimilar overall coloration. One fish may keep in the shadows under an undermined tree and be a "black" fish while another may habitually maintain a

Body—Iridescent or silvery

Sides—Light background color

Sides—Dark spots on light

Sides—No red speckles



Belly—Usually whitish

Sides—Often a red stripe

Tail fin—Many black spots

Lower fins—Relatively plain

How to Identify the RAINBOW TROUT

. . . Rainbow Trout

position in a sunny shallow over a light colored bottom and be very pale. This is an example of the fact that our trout cannot be positively identified on the basis of color alone.

Rainbow trout do not possess the "wrist" at the juncture of the caudal peduncle and tail fin as do the Atlantic and landlocked salmon. This difference alone should help you to separate rainbows and salmon.

Catchable fish fresh from the hatchery vary greatly in appearance depending on age, sex, strain, and hatchery pool. The large adults and "sugar" fish may be either bright as a new silver dollar or dark and scarlet as the last minutes of a summer sunset. The pan-sized hatchery fish, with the expected exceptions, are more uniformly like the picture-book conception of rainbow trout with the stripe and black spots.

Since they have long been a favorite of fish culturists, many, many varieties of rainbow trout are now to be found in stocked waters. Originally a number of local types of rainbows, such as the McCloud River rainbow trout and the Kern River rainbow trout were to be found and identified in their home waters. It is debatable whether or not any pure strains of many of these varieties may be now found since mixing in hatcheries has been so thorough. The New Jersey hatchery rainbow trout is a development of strains

that are singularly suited to the conditions of our state.

In general mature male rainbow trout have larger, more angular heads than the females and have deeper but vertically flattened bodies. The breeding males are more colorful than the females. Mature females have more of a bullet-shaped head and rounded bodies and are of more subdued coloration. Immature rainbows of both sexes are quite similar in external appearance. The young fingerlings have dark parr marks on the sides but lack the definite rainbow stripe.

Not enough information is available to provide complete growth rate data for wild rainbow trout in New Jersey. However, based on growth of rainbow trout in other areas, wild rainbows of one year of age in New Jersey streams could be from 2 to 4 inches while three year old fish may be 7 to 8 inches long. On the other hand, hold-over rainbows in suitable lakes with landlocked herring for food, such as Hopatcong and Greenwood, may grow several inches in a single summer. The monster rainbows of the Delaware River also apparently attain their great size in a relatively short time.

The largest rainbow trout recorded landed with rod and reel in New Jersey was a 5-pound, 11-ounce fish caught in Greenwood Lake by Edward J. Poteran in 1957. A good number of 2- to 4-pound rainbows are taken from the regularly stocked waters each

. . . Rainbow Trout

season. (The world record rainbow trout we recognize was a 37-pounder caught in Lake Pend Oreille, Idaho, during 1947.)

Since most of the rainbow trout caught in New Jersey are hatchery products, the size of the fish taken depends on the size of those stocked. Most of the rainbows dis-

TABLE I. Size and number of catchable Rainbow Trout from State hatchery stocked in New Jersey during 1960.

Size in Inches	Number Distributed
7-8	1,788
8-9	15,567
9-10	43,908
10-11	52,519
11-12	51,989
12-13	24,954
13-14	9,400
14-15	1,905
15-16	658
16-17	541
17-18	213
18-19	34
19-20	24

tributed from the state hatchery are from 7 to 14 inches in length. The numbers of catchable rainbow trout by sizes distributed from the Hackettstown Hatchery last season are listed in Table I.

In addition to the state hatchery fish, 35,555 rainbow trout from

TABLE II. Size and number of catchable Rainbow Trout from Federal hatcheries stocked in New Jersey during 1960.

Size in Inches	Number Distributed
7-8	1,422
8-9	8,888
9-10	13,465
10-11	7,892
11-12	3,482
12-13	380
13-14	26

Federal fish hatcheries were liberated in our streams last season.

The numbers of rainbow trout by sizes obtained from Federal hatcheries and stocked in New Jersey last year are given in Table II.

Distribution

As mentioned previously, the rainbow trout was not native to New Jersey prior to being stocked by man. Therefore, its distribution stems from stocking.

Apparently just about all of our rainbow trout are hatchery fish. However, this does not mean that no truly wild rainbows are to be found in New Jersey. Fingerling-sized rainbows with the characteristic parr marks on the sides may well be wild fish since few such fish are stocked in the state. There is evidence that the Delaware River and its cooler tributaries do support a resident population of rainbow trout.

The places in general where rainbow trout are to be found with any reasonable degree of regularity coincide quite precisely with the locations at which they are stocked by the state. These waters include practically every lake, pond, and stream open to the public that has suitable water conditions for trout at least during the spring months. Thus, rainbows may be caught in any county of the state at some time of the year. A list of the waters stocked with rainbow trout was published in the past April issue of *New Jersey Outdoors*.

Not all the rainbow trout are confined to the waters stocked since rainbows often are remarkably migratory and move about

considerably. Large rainbow trout have been caught in Barnegat Bay, the Hudson River, many unstocked reservoirs, and, of course, the Delaware River. Occasionally, a seagoing rainbow apparently from New Jersey is reported taken from the ocean itself.

Rainbow trout often prove to be dependable as hold-over fish in both lakes and rivers where they provide year-around fishing. And, they frequently are the most tenacious trout to survive the adversities of life in park ponds. There is strong evidence to suggest

where they are stocked. If placed in a pond or slow stream, the rainbow will be there for at least a while. Even in large streams with heavy water and swift rapids the rainbow is just as apt to keep in a large, deep pool or under a log or bank. Of any rule for finding rainbow trout in a particular stretch of water, that of seeking them in the deepest spot immediately available is generally dependable.

In lakes and ponds rainbows cruise about most anywhere during all but the warmest weather when they may be forced to seek the cooler waters of spring holes or deep sections. In herring lakes they frequent the open waters where the forage fish are, while in ponds they often favor the moving water at the lip of the outlet.

Behavior

Rainbow trout prefer well-oxygenated waters of 50° to 60° F. with plenty of space. Although they can tolerate water temperatures in the upper eighties, the highest limiting water temperature is believed to be about 83° F. They do best in the wild where minimum temperatures do not go below 39° F. and maximums do not exceed 60° F.

Stream bottom conditions that best suit rainbows are gravel beds, rocky stretches, or silt and detritus that yield food. In lakes and ponds the bottom-type preference is usually immaterial as long as food is present.

Rainbow trout in streams are quite as active at any time of the



Rainbow trout are good stream fish

that rainbow trout are more tolerant of high water temperatures and conditions of pollution than the other trout species.

For years rainbow trout have been associated with turbulent, white water of large streams. However true this conception of rainbow habitat be, it is more fanciful than factual in New Jersey. The fish are simply found

. . . Rainbow Trout

year as are other trout and generally feed well in both winter and the dead of summer. In lakes however, they almost invariably are most available during the last week of May and the first week or so of June. This period is *the* time for lake fishing.

Early in the springtime between ten in the morning and four in the afternoon are the better hours to fish. As the season progresses and the waters warm and recede the better fishing times are early morning, evening, and the witching hours around midnight. During and immediately after a summer rain are notably productive periods to fish for rainbows.

Food and Feeding Habits

The food selection of the rainbow trout places it as our most omnivorous trout. Under usual conditions the mainstay of the rainbow trout's diet is aquatic insect life supplemented with other fish (especially in certain lakes), land insects, and worms. In some waters scuds or plankton may be the staple food while in other waters plant life in the form of freshwater algae may be the staff of life for the rainbow. And, the sweet-tooth the rainbow has for salmon eggs is widely exploited. For some strange reason rainbows have a fondness for cut bait chunks of white sucker meat.

The larvae, or nymphs, of mayflies, caddis flies, and two-winged flies are the most important foods of the rainbow trout in most

streams. Beetles, ants, stoneflies, snails, grasshoppers, and snails are other prominent foods. Most of the food is obtained underwater but during hatches floating insects are also taken well. In most rainbow trout lakes herring are the basic food much of the year.

In streams the favorite feeding locations are at the heads of riffles, in deep runs, behind a boulder in white water, ahead of an obstruction in heavy rapids, or under an overhanging bank or log. When taking surface food rainbows often position themselves just under the surface of the water in the main current of a pool. In lakes the open waters of the main lake and large bays are favorite areas while drop-offs are preferred haunts.

Reproduction

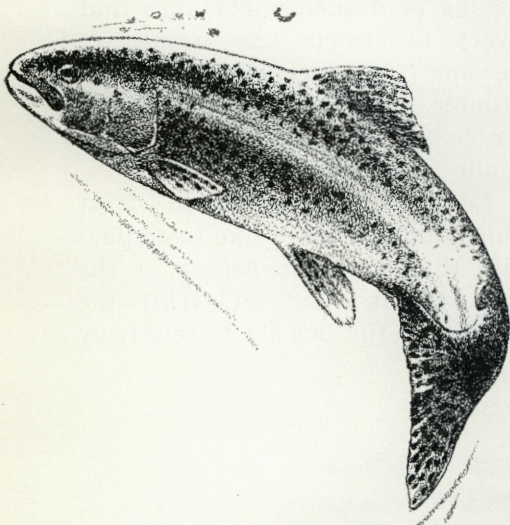
Originally rainbow trout were spring-spawning fish that laid their eggs in the headwaters of streams during February to June. However, manipulation of breeders and selection of strains by fish culturists has produced many different reproduction habits in rainbows with winter and fall, as well as spring, spawners.

Since virtually all rainbow trout in New Jersey are direct products of the hatchery, natural spawning is rather unimportant. It is rare to find successful reproduction in appreciable quantity to provide sport fishing.

Of the wild fish that do spawn most seem to do so in the middle of spring, about the first two weeks of May. In their brilliant breeding colors, the adult fish ascend suit-

able streams where they select gravel or rubble beds for the redds or nests. The fertilized eggs are left unguarded and hatch in about a month to six weeks under usual stream conditions. Because of silt, other types of pollution, and general unfavorable conditions only token quantities of the eggs hatch and even fewer of the vulnerable fry ever reach catchable size. Those that do reach maturity are, however, beautiful and sporty fish.

The hatchery production of



The rainbow is the fightingest trout

rainbow trout involves artificial stripping of mature breeder fish for the eggs and milt and incubating the fertilized eggs in troughs. With proper diet and disease control, no easy task at times, the yield of quality fish is high.

Value

The rainbow trout justly has the reputation of being the fightingest of all trout. In quick water it will strike a fly with a fierce rush and

put up a fight of never-to-be-forgotten thrills. In a lake it will savagely smash into a trolled streamer and immediately take to the air in an aerial display of acrobatic leaps. Truly, the rainbow is a top-notch gamester.

The clean-cut lines and silvery burnish of a good rainbow make it a magnificent fish to behold. They keep well after being caught and are excellent for eating. Rainbows grow to a respectable size in the hatchery to provide large, fighting fish in heavily fished waters.

Of prime importance is the fact that, while rainbows will bite well even early in the spring, they do well all through the season and provide year round fishing in suitable waters. Freshly stocked rainbows may hit most any old lure with abandon; but, once they have been nicked by a hook they can become cagey and difficult to entice. And, rainbows are excellent for fly fishing as well as spinning.

The rainbow's tolerance of adverse water conditions render it an excellent choice for stocking some of our border-line trout waters where it usually provides very satisfactory fishing. Its adaptability to life in either the largest rushing rivers or the deepest lakes, and virtually all trout habitats in between, makes it popular with many large groups of fishermen. Finally, its very name, rainbow trout, weaves a vision of singing waters, pleasant hours astream, and a treasury of trout lore in the minds of hopeful anglers. #

Some hints for the amateur and tyro on
what to use to catch trout with the

WET FLY

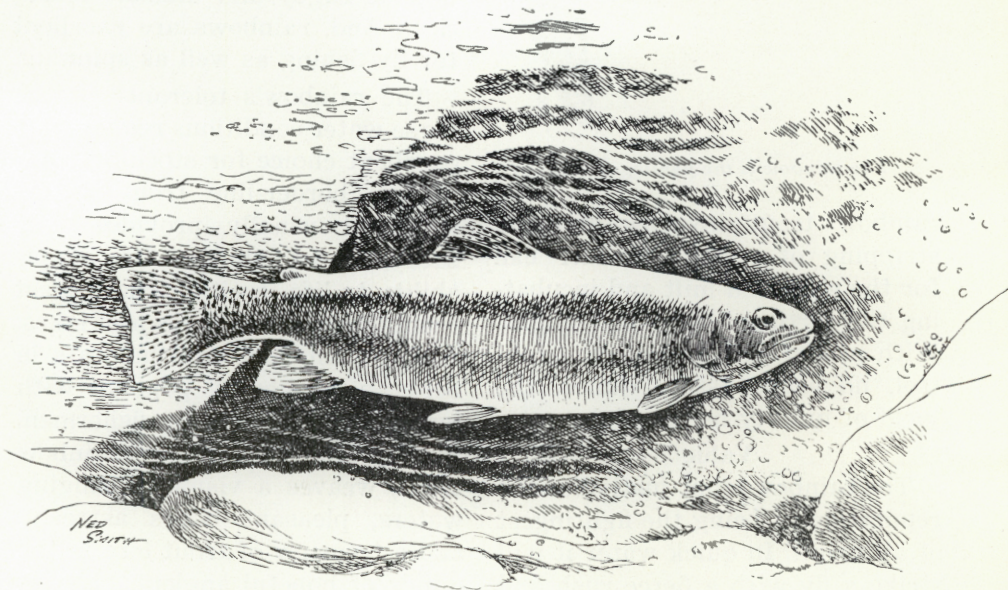
By JACK PHILLIPS

SINCE TROUT obtain most of their food under water, it follows that flies fished beneath the surface of the water should, during most times in the course of a season, take the most trout. And, this assumption holds quite true on most New Jersey trout waters.

Therefore, wet fly fishing is the logical form of fishing for the beginner to take up in his quest for trout. However, this initial introduction to fly fishing through the wet fly should not be construed to mean that wet fly fishing is the

easiest method of fly fishing. On the contrary, the wet fly is the most difficult type of fishing to do *properly*. Nevertheless, wet fly fishing is of such importance that every fisherman who wishes to become a serious all-around trouter, and not a purist of the dry fly only, must master the technique.

Lest any tyro be scared off at this point we would like to emphasize that it is the *fishing* of the wet fly that is difficult. While the fishing of the dry fly is relatively



simple, the casting skill required and the knowledge of stream insects essential more than offset any simplicity the dry fly method has over that of the wet fly.

Of further comfort and encouragement to beginners is the fact that much less specialized and expensive tackle is required for effective wet fly fishing. It is the selection of the fishing gear with which we are now concerned.

Tackle

Most fishermen already have some kind of a fly rod, line, and reel that can be used as a starter outfit. As long as it is reasonably suitable for the task, use it. But, if it is of very low quality, in a very poor condition, or not fairly well "balanced," we suggest that at least a balanced rod and line be acquired. Fly fishing requires the proper tools if it is to be rewarding and enjoyable.

Fly rod outfit:

The rod, line, and reel are practically a unit as used together. Thus, each component should be selected in relation to the other. Although the line is essentially the primary implement of the fly caster (the rod is merely employed to propel the line), the rod is customarily chosen as the nucleus of an outfit.

At one time bamboo fly rods were offered in a vast array of actions from soft-wet-fly to stiff-dry-fly. Nowadays a glass rod made by a reputable manufacturer in a fairly stiff, dry fly action is best for general use, including wet



fly fishing. The rod should be 7 to 8 feet long, preferably two-piece.

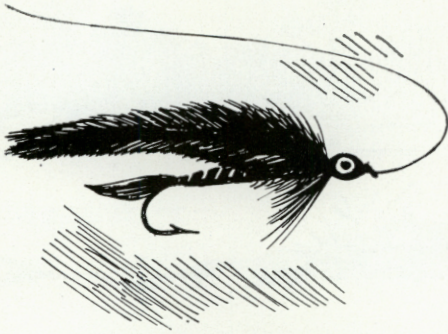
The line must fit the action of the rod. Most appropriate rods handle a size "C", or sometimes a "D" line to best advantage. While a level line will do the job satisfactorily, a tapered line of size "HDH" or "HCH", will permit better presentation of the fly and be of immeasurable value for dry fly casting. Floating lines of synthetic material are the best all-purpose kind. Since the reel is merely a convenient spool for the line, any decent single-action fly rod reel with a large diameter arbor to prevent line kinking is acceptable.

Leaders:

For most wet fly fishing a 7½-foot nylon tapered to 3X is appropriate. For large bucktails or streamers in heavy water or in snaggy pools a 1X tippet will save more heavy fish that may be

. . . Wet Fly

hooked. As the waters go down and clear and smaller flies are



Streamers are good for large trout

used, 5X and 6X tippets on 9- or 12-foot leaders are sometimes required to take fish.

Accessories:

As in most trout fishing, certain items will add to the efficiency and sport of the anglers. For stream fishing waders or boots are practically a must. A landing net and creel help to land and keep fish in good condition for eating.

Two small fly boxes are better than one large one for flies. Smaller ones are easier to pocket and, if one is lost, the day's fishing is not ruined. A leader box or packet is handy as are a knife and a combination fly fishing tool with disgorger, stiletto, and clipper. Line dressing and leader sink are often helpful. All these are most conveniently carried in a fly fishing vest or jacket.

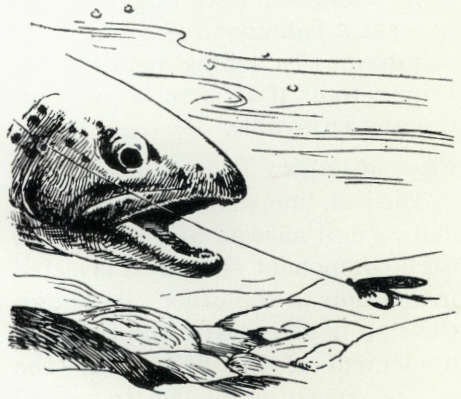
Flies

Under wet flies we are considering the nymph, the conventional

hackle and winged flies, bucktails, and streamers, as well as life-like imitations of insects or other natural food only if they are tied solely of the usual feather, hair, and body materials. We are excluding plastic, metal, and wood lures at this time.

Nymphs:

In most waters the larval form of aquatic insects, commonly just called "nymphs" by fishermen, are the main food of trout. Therefore, nymphs, in the parlance of anglers, should be prominent in the trout-er's selection of lures. Artificials that represent the larval stage of mayflies, caddis flies, two-winged flies, and stoneflies, are basic ones to select. General rules are that



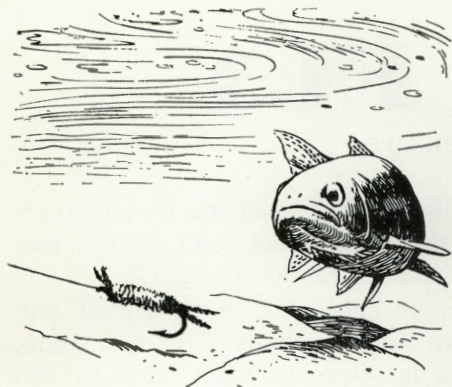
Trout really go for the wet fly

nymphs be sombre hued, not overdressed, and of smaller sizes such as on 12 and 14 hooks of stout wire.

Wet flies:

Conventional wet flies may be taken by trout as aquatic insects

in the transformation to the adult stage, drowned adult flies, minnows, or drifting organisms of



Nymphs should be fished deep

many kinds. While larger, heavily-dressed wet flies often attract big trout in large waters, the smaller, lightly-dressed wets consistently bring the most hits. For New Jersey fishing the following patterns, each in size 10, 12, 14, and 16, will ordinarily suffice: Royal Coachman, Coachman, Black Gnat, Dark Cahill, Brown Hackle, Gray Hackle, Quill Gordon, and Iron Blue Dun. These flies should be tied on either turned-up or turned-down eye hooks of heavy wire and without snells. (At this point, we emphasize that the tackle and flies suggested in the article are for the tyro and amateur. As experience increases even they will add to, or possibly subtract from, the tackle and patterns here recommended.)

Streamers and Bucktails:

Streamers and bucktails are long-shanked flies quite obviously

meant, at least by the fly tyer, to represent minnows of some kind. For this reason those that are either similar in color and shape to the forage fish found in a given water or composed of the colors of the spectrum generally produce fish. Flies of this type that comprise a basic assortment for New Jersey conditions include: gray squirrel tail, brown and white bucktail, Mickey Finn, Silver Doctor, and Royal Coachman on long-shanked, heavy hooks in sizes 8, 10, and 12.

Specialties:

Specialties include those flies tied with conventional fly tying material to represent such trout foods as grasshoppers, inch worms, frogs, crayfish, hellgrammites, and scuds. This category is almost limitless, and can become very expensive if you do not tie your own flies. Nevertheless, it is usually advantageous to have at least one fly in a small size to represent each of the listed organisms.

In general:

Several representative patterns of flies in appropriate sizes almost invariably will prove adequate for wet fly fishing in New Jersey. Small sizes are generally best. (The size of the fly is considered by some experts to be more important than the color or pattern.) Purchase only good quality flies, or better yet tie your own flies. Finally, know what to *do* with the fly you do use. #

Some hints for the amateur and tyro on
what to do to catch trout with the

WET FLY

By JACK PHILLIPS

THE METHODS of fishing wet flies are even more important than the tackle and flies used. All the items absolutely needed are a rod, reel, and line and a reasonable assortment of flies. But, when it comes to knowing what to *do* to catch trout with wet flies, a fair bit of savvy is required.

Fundamentals

The fisherman who already knows how to catch trout with bait has a good start toward being a fly fisherman. He no doubt realizes that the main idea is to present the lure to the trout without scaring the fish. If it be the correct fly at the right time, a hit is most likely to result.

Since fly fishing comes into its own as the streams recede and clear, the fish are apt to have become increasingly wary. Also, many of the better fish are ones that have been hooked, lost, and thus educated. Consequently, more care in approaching likely waters is essential for fly fishing.

Rigging the Tackle

The smallest feasible fly on the lightest suitable leader generally means the most rises or hits. Therefore, for nymphs and wet

flies employ at most a leader tapered to a 3X tippet and for streamers one not heavier than a 1X.

No split shot or weight of any kind should be used for fly fishing. It is wiser to learn how to fish deep, when necessary, by using sinking leaders and flies with stout wire hooks and heavy bodies.

To begin with the line should be dressed, if desired, and leader-sink applied to the leader, which should be stretched to remove kinks. The fly selected should be tied directly to the leader without snells, loops, snaps, or swivels. Although formerly quite popular, the use of a cast of two or three wet flies is less frequently employed nowadays. A single fly is more easily cast and manipulated, and seems every bit as effective.

Stream Fishing

Wet fly fishing for trout in streams is one of the most challenging and inviting forms of angling. It is the classical trout fishing around which has been built a veritable heritage of trout lore and about which have been written reams of trout fishing tales. In New Jersey, since the bulk of the trout are stocked in

streams, stream fishing also offers the opportunity for more fishermen to fish for more trout.

Two rather closely intertwined approaches for presenting wet flies to trout in streams are common. Although any one method may be used to the exclusion of the other, the two should be tried to meet various conditions. Frequently the two systems may be combined in one cast.

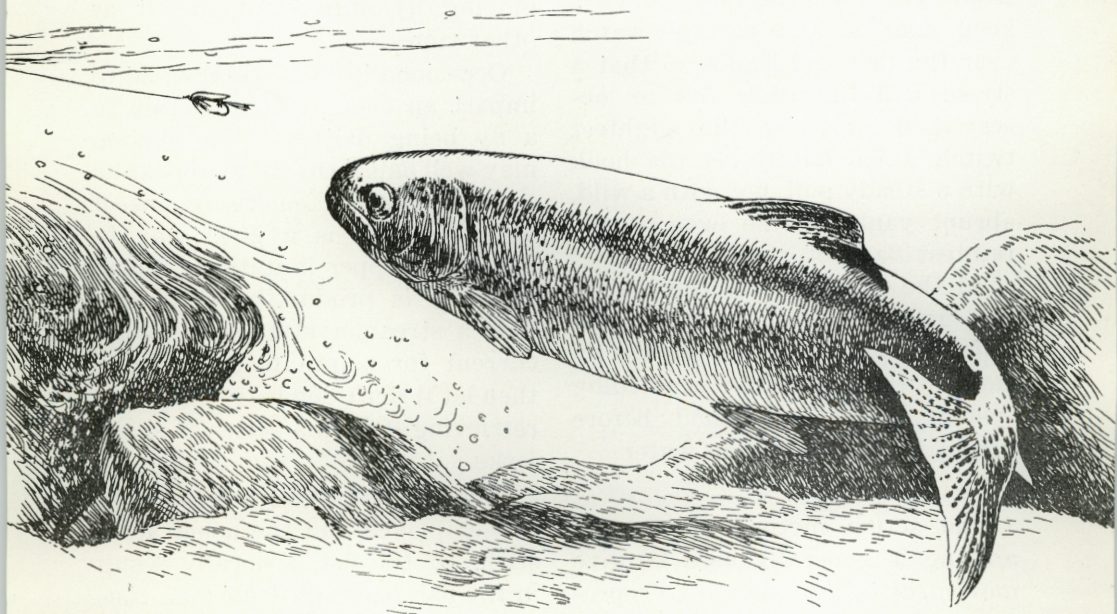
Drift Method:

The natural drift method of wet fly fishing is somewhat akin to bait fishing except that an artificial fly is used and the hook must be set the instant a strike is registered. In this type of fishing the fly usually is meant to represent a drowned insect, a larva or nymph, or a free-drifting, emerging insect. It would probably account for more trout

in a given season than all other fishing methods combined, if it were faithfully and studiously practiced by more anglers.

The lures most suitable for this fishing are the conventional, sombre wet flies, the so-called nymphs, and specialty imitations. However, on occasion exceptional results may be obtained by drifting a streamer or brightly dressed wet fly, which probably represent a dead or injured minnow caught in the sweep of the current. This method permits the deep fishing often necessary for the big fellows.

The cast for this method is made upstream into a pocket, riff, pool, or other likely water so that the fly has an opportunity to sink to the depth of feeding fish before being lifted by the drag of line and



. . . Wet Fly

leader. The fly may advantageously be permitted to continue on past the angler for cross-stream coverage and then let drift even further downstream with a slack line. Or, individual casts may be made to cover each section of water.

By observing feeding fish or deducing where feeding fish should be located, the prime spots to fish and the depth at which to drift the fly may be determined. As a rule the deeper the fly goes the better are the chances of a fish seeing it and taking it. Particular care should be taken to work the fly well under logs, banks, brush, and large boulders. Even though frequent snagging may result more fish will be found.

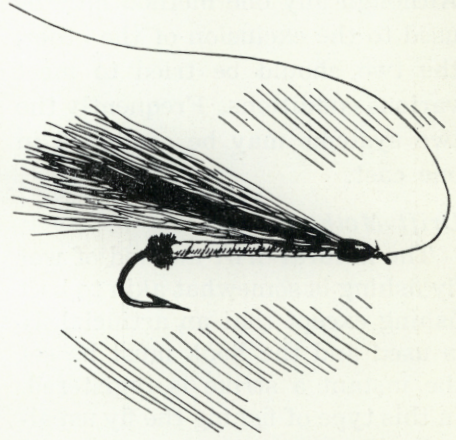
Key to successful drift fishing is to know when and how to hook trout that take the lure. Always keep control and careful watch over the line and leader so that a strike will be either felt or observed if only by the slightest twitch. Immediately set the hook with a steady pull, not with a wild, abrupt yank. Strike even at the faintest flash of a rolling fish.

At the conclusion of the cast in the drift method some experts follow through by bringing the fly back to them with the succeeding system, or action method, before lifting the fly from the water.

Action Method:

The action method of wet fly angling is generally used to give movement to a fly meant to repre-

sent a minnow or other small fish. The action is caused by sweeping or twitching the rod, retrieving line with the hand, or even reeling in line. The rhythm and intensity of the twitches and the speed of



Bucktails represent various minnows

the retrieve should be varied under various conditions. At one time fish may strike savagely at a fast moving fly only to ignore it at other times.

Occasionally, it is worthwhile to impart an ever-so-slight action to a fly being drifted. This system may well cause the fly to appear as a drowning or emerging insect swimming. It is a good way to fish grasshopper imitations. Sometimes it is productive to simply hold a streamer stationary in the current for a minute or two and then let it drift downstream before retrieving it with a series of sharp jerks.

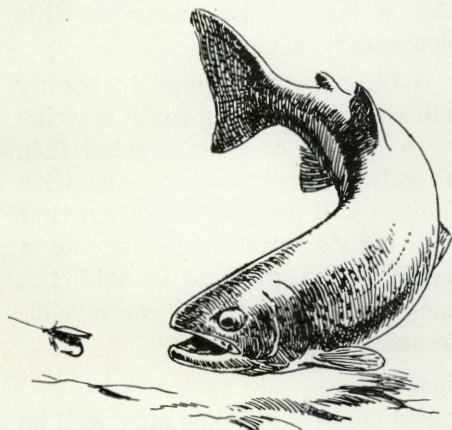
In action wet fly fishing the tight line employed and the usual fierce strike of the fish generally result in the fish hooking itself on a rise.

Nevertheless, be prepared to set the hook by a quick flip of the rod tip.

The old-timers' trick of skipping the fly along the surface is a form of wet fly fishing that still takes fish. It is usually best done with a bright fly in riffs or on a windy day.

Dapping:

One other variety of wet fly fishing, actually a modification of the two basic methods, is dapping. In



Wet flies may be given action

dapping a fly a short line, about rod-length or less, is used. The fly is simply dunked directly into the water without a true cast. It is a most appropriate way to fish small brooks, isolated pockets, and brushy spots.

The fly should be dropped into the water, permitted to drift while sinking toward the bottom, and then returned to the surface with action. For a nymph and most flies the action should be subdued; for streamers it may well be erratic and flashy.

Dapping is a good way to pre-

sent nymphs, artificial grasshoppers and hellgrammites, and imitation frogs. Often the fish can be seen taking the lure and little problem is experienced in setting the hook. If the fish cannot be seen, watch the line or leader where it enters the water and strike at the slightest indication of a twitch or pause.

Lake Fishing

Lake fishing can provide some of the best of wet fly fishing. Some of our lakes are well-stocked and many of them contain good hold-over fish so that really large trout may be taken on flies. Frequently, the trout fishing pressure on lakes becomes relatively light after pickerel and bass fishing come into their own.

Trolling:

Without doubt trolling a streamer behind a boat or in the wash of an outboard motor is one of the most exciting and rewarding forms of trout fishing. It permits covering the most water while keeping the fly in the water, where the fish are, for most of the time. And, it sure produces big trout.

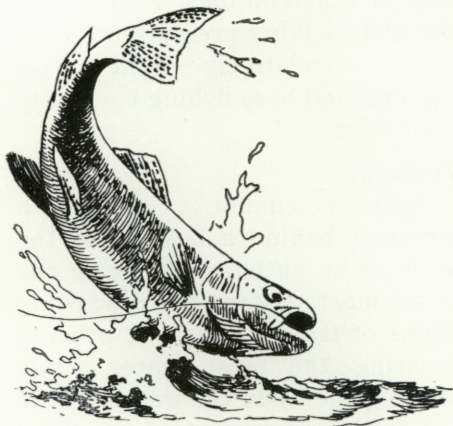
Large, gaudy streamers are considered best for trolling. A 9- or 12-foot leader tapered to 1X, or a 12-foot level 4- or 6-pound test leader, will bring more hits than the frequently used 20-pound test nylon. But, go easy on setting the hook. The fish usually hook themselves anyway.

The so-called fast, or short-line, troll is made by operating the motor (a necessity) at a speed of

. . . Wet Fly

about three to six miles an hour. Then enough line is stripped out so that the fly is held about 25 to 30 feet astern in the churning wash of the propeller, which seems to draw fish. Troll through the open waters in the middle of the lake and in large bays, along drop-offs, and at inlets and outlets. And, be alert for action at any instant.

The slow, or long line, troll is used to get the fly down to deeper waters where the fish may be during warmer weather or unusually



busy days when many boats are on the lake. This kind of trolling may just as well be done with or without a power boat since paddling, rowing, and even drifting in a brisk breeze provides sufficient headway. A speed of one or two miles an hour will suffice.

While big, bright streamers are usually used for this method, smaller imitations of insects, crayfish, or minnows may be tried. A leader of 12 feet tapered to 1X or

3X is good and a sinking line is often advisable.

As the craft moves slowly along enough line is stripped out to allow the fly to sink to the desired depth. The correct depth may be only a foot or so, and 50 or 60 feet of floating line may be just right. Or, the fish may be down about 30 feet, and a 100 or more feet of sinking line may be required. Try various depths until the fish are located. (The use of a thermometer to find fish is beyond the scope of this elementary article.)

A bit of action given to the fly will commonly bring forth a strike from otherwise disinterested fish. At other times bold sweeps with the rod will provide an action that will induce hits. As long as a reasonably tight line is held, the hook may be set by merely increasing the tension.

Casting:

Fly casting in lakes may well be done from boats, docks, the shore, or by wading. It is especially worth trying early mornings, late evenings, and at night.

The same techniques employed for the action method in streams apply. In addition to the streamers and gay flies that represent minnows, however, experiment with the small nymphs, dark flies, and imitation scuds. These smaller morsels are often taken by trout in lakes as irresistible tid-bits.

Since the feeding trout are likely to be cruising, it is not always necessary to change your location once a good spot is found. But,



stealth, camouflage, and long, fine leaders are important.

The same methods used for lake fishing may be used in larger ponds. In smaller ponds particular attention should be given the inlet and outlet areas and both the drift and action methods used for streams should be employed. The dapping method can be especially rewarding in beaver ponds. Concentrate on the smaller, sombre flies and nymphs when the water is very clear.

This brief introduction to the ancient and stimulating art of wet fly fishing is offered merely to assist the beginner in getting started and to help the amateur catch a few more trout. A few trips to stream or lake will open up new vistas of possibilities for wet fly fishing. A good fly fishing book will provide the broad background that is so essential, and the acquaintance of a successful local fly fisherman will fill in the chinks of the finer points. #

JAMES W. HAND, FORMER COUNCILMAN

James W. Hand, former member of the New Jersey Fish and Game Council died on March 8.

The New Jersey Fish and Game Council notes his passing with sincere regret and a feeling of deep personal loss.

Everyone who knew Jim Hand loved and respected him and admired his lifelong devotion to the cause of better sportsmanship, both in the field of conservation and in the training of young Americans.

His untiring work with many generations of youngsters in and around his home community of Millville, will constitute a lasting memorial to him in the hearts and the minds of the many thousands of youngsters whom he helped to a better life.

Conservationists of New Jersey will also remember Jim for his fair-minded and conscientious contributions to the policies of the New Jersey Fish and Game Council.

SHAD in the RARITAN RIVER

By A. BRUCE PYLE
Assistant Fisheries Biologist

THE American shad, *Alosa sapidissima*, at one time ascended the Raritan River to spawn each spring. Prior to and during early colonial days they were an important source of food for both the Indians and white settlers. To catch them Indians would construct traps, nets, or weirs of tree branches and drive the fish into them. Fish unfortunate enough to get caught in the "brush" were the Indian's reward. The situations in which this method could be used were limited and, though crude, it was sufficiently effective to provide the red men with adequate quantities of fish. It is doubtful that the Indians seriously depleted the shad population with this method. Thus the shad fishery of the Raritan was virtually unexploited when the white settlers came to this country.

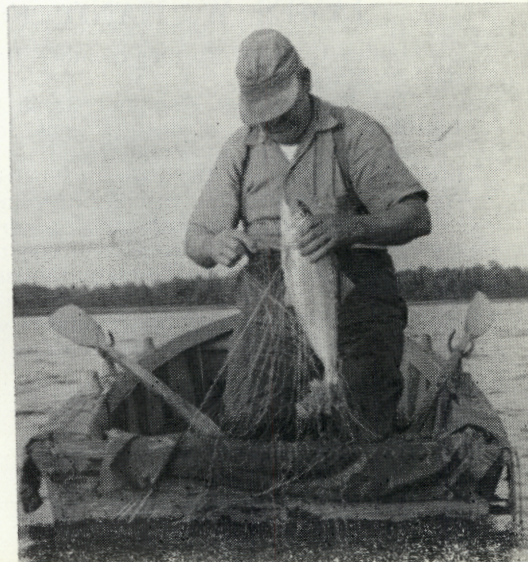
With the settlers came improved methods for catching the shad and a greater demand for them. From the mouth of the river upstream to as far as the shad would go on their annual spawning run, fishermen used pound nets, haul seines, weirs, fykes, traps, and baskets to capture them. Fishing was so intense that as early as 1766 legislation was enacted regulating the manner in which these fish could

be caught. By 1799 haul seining was the only legal commercial method of fishing in the Raritan drainage from the river's mouth to the first mill dams.

Insurmountable dams have always been an obstacle limiting the spawning success of anadromous fishes. Many were being built on the Raritan and its tributaries during those days when water was the chief source of power. These appeared to be adversely affecting the shad run to such a large degree that by 1874 a law was enacted making it mandatory for fishways to be built over the dams at the expense of the owner.

Despite efforts to maintain the shad run in the Raritan these fish were destined for extinction in this river by a condition which was

Shad—sport and food fish



gradually creeping over the river—pollution. Few, if any, were aware of it or its impending results.

The cause of this pollution was the rapid industrial and community growth along the river. Waste treatment plants were unheard of in early days; later when communities built them they were rendered obsolete in a relatively short time. A gradual decline in the shade population accompanied the increase in population. The final blow came after World War I when the remnant of the once large shad run was sacrificed to increased industrial growth. The river became so intensely polluted that the stretch from above Bound Brook to below Washington Canal to all intents and purposes was devoid of fish life. In the late 30's public agitation began to mount for a clean-up of the Raritan River. A trunk sewer had been proposed and this appeared to be the most economical method of cleaning the river. Before too much headway was made, however, World War II came along and then it became unpatriotic to complain about pollution.

Finally, the Middlesex County Trunk Sewer Authority was organized in the early 50's and work to clean up pollution in the Raritan Valley commenced in earnest. With the partial completion of the trunk sewer and the unusually high river flow during 1958, the Raritan River appeared clean enough chemically to support shad once more. This evidence was sup-



Author Pyle with adult shad

ported by the movement of other species of fish into the previously polluted areas.

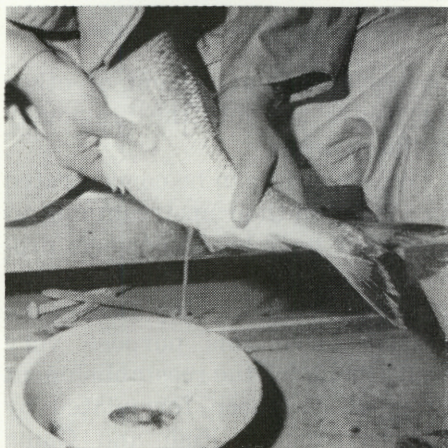
Where shad can be concentrated in a river on their upstream migration they have been known to provide excellent sport fishing. The Five-Mile Dam at New Brunswick should serve this purpose very well. Plans for the reestablishment of shad had been formulated by the Division of Fish and Game pending the river's cleanup, now they were ready to be activated.

Generally, shad are a "homing" fish, that is the adults return to spawn in the stream in which they were reared. We use this term loosely since it is known, for example, that shad from the Hudson and Connecticut Rivers occasionally stray from one to the other. The possibility of these shad straying to the Raritan is conceivable. However, since straying is an exception, the chance reintroduction in this manner was considered too uncertain. Consequently, our objective was to obtain ripe shad

. . . Shad

eggs, fertilize, and hatch them directly in the Raritan River or its tributaries. Those fish hatched and reared successfully would adopt the Raritan as their "home" stream and return there to spawn.

Three sources were considered for eggs—the Delaware, the Hudson, and the Maurice Rivers. The presence of a commercial fishery



Stripping eggs from ripe shad

in the spawning area was necessary since the Division of Fish and Game had not the time, personnel, or equipment to capture shad in sufficient numbers for this purpose. Since the Delaware had no commercial fishery in the spawning area, it was ruled out. An attempt to obtain ripe eggs from the Hudson River was made through the cooperation of the Division's Coastal Patrol and commercial gill netters in the vicinity of the Palisades Interstate Park. This failed as shad caught there

were not sufficiently ripe. To venture farther upstream for ripe shad was not considered wise, since the distance the fish must travel to reach their spawning grounds should approximate that of the Raritan. A shad that must travel 100 miles in fresh water before it is ready to spawn might have difficulty establishing itself in the Raritan. The Maurice River, having shad with a spawning run approximating that required in the Raritan, was believed to be the most promising source of spawn.

A dependable supply of live, ripe, adult shad was obtained through the cooperation of Mr. E. L. Peterson, a 75-year old commercial, drift, gill net fisherman from Millville. As the shad were removed from the gill net, the eggs were stripped and fertilized. These were then placed in buckets and transplanted to the Raritan in the vicinity of Somerville, then transferred to hatching boxes especially designed for shad eggs. Since shad eggs are semi-buoyant and float with the current until hatched, the hatching boxes had to simulate

Hatching boxes for the eggs





Good hatches were obtained

natural conditions as closely as possible. This was accomplished with minor adjustments in the original design, and relatively good hatches were obtained. The resulting fry remained in the boxes until they had absorbed their yolk sacs. They then passed through the screening on the bottom of the box into the river. Approximately 34,000 shad fry were introduced into the Raritan River during the spring of 1959 by this technique.

The major factor influencing the success of this introduction was and is the quality of the water in the river. The decision to initiate the shad reintroduction program was probably premature as it was based on favorable water conditions observed during the summer of 1958. It has since been determined that this high water quality was due to favorable flow from unusually heavy rainfall and cooler temperatures which prevailed through most of that summer. Such conditions did not exist during the summer of 1959, following the reintroduction, even though

more pollution had been eliminated. In fact, a block of polluted water about 1/3 of a mile long existed in the vicinity of Bound Brook through the late summer and early fall, the time of year young shad move downriver to the ocean. Whether the young shad were able to negotiate this unfavorable stretch of water, and whether or not they can survive the many obstacles which still face them will not be known until 1962 or 1963, since shad spend 3 to 4 years at sea before returning.

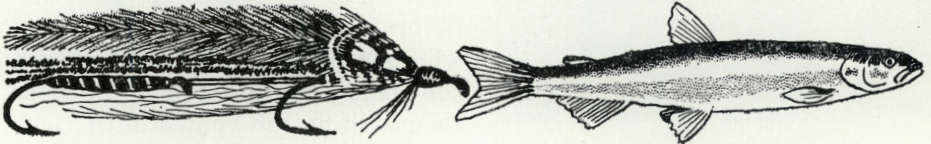
Plans had been made to hatch shad in the river for four continuous years in order that a run would occur each year during their period of reestablishment. It is hoped that from these initial plantings annual runs would build themselves into the proportions which once existed. The polluted condition of the river observed in the summer of 1959 has left doubt as to the success of this program at this time, at least during periods of low summer rainfall. When Spruce Run Reservoir is completed it will deliver water to the Raritan during periods of low flow. These "compensatory flows" and continued pollution abatement programs are the only hope for maintaining unpolluted conditions.

The shad was long the symbol in the fight to clean up the Raritan. Now that we are on the verge of success let us hope that the shad will become the symbol of a type of sport fishing associated with the Raritan that will attract devotees from all over the state. #

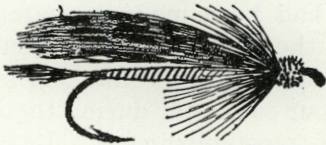
Fur, Fin ^{and} Campfire

By JACK SORDS

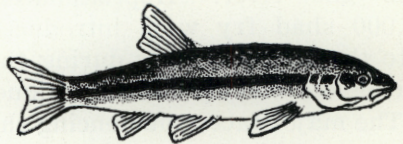
BUCKTAIL AND STREAMER FLIES AND THE NATURAL MINNOWS THEY ARE MADE TO IMITATE



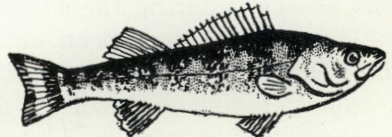
TANDEM GRAY GHOST ————— SMELT



MUDDLER MINNOW STREAMER ————— SCULPIN



BLACK-NOSED DACE ————— BLACK-NOSED DACE



YELLOW PERCH STREAMER ————— YELLOW PERCH

Check the Compendium of Fish Laws for Fly-Fishing Regulations
Which are in Effect from May 8 in Certain Designated Waters

The reintroduction of

QUAIL

In the Mendham Area

By CYRIL F. dos PASSOS

SOME 30 years ago I purchased about 90 acres of farm land two miles south of Mendham on what is now known as the Tempe Wick Road. A good part of the property was woodland, but some was in cultivation. There was a fruit orchard as well as a swamp that was once the site of a mill-pond. The cultivation of the land and orchard was continued for a few years. Farming was then abandoned so that the once-open fields grew up to brush and small trees, principally bush honeysuckle and sugar maples that seeded from a row along the highway.

In the meanwhile my home had been built and my family moved in. At that time there were plenty of pheasants and some quail, which were both seen and heard, on the property. But the game situation gradually became worse, and worse until the pheasants were scarce and the quail apparently non-existent since they were neither seen nor heard. Being fond of quail, I decided several years ago to see if something could not be done about their reintroduction.

To that end, during the winter and spring of 1957 about five acres of the overgrown farm land were cleared, soybeans, and Canadian peas planted, and some full-grown

birds released. The birds were seen or heard for several weeks and then disappeared, while the deer made a thorough job of cleaning up the soybeans and peas. In the meanwhile a number of foxes had been seen, sometimes two or three of an evening. There seemed to be several things wrong with the original plans!

At that point I got in touch with the Division of Fish and Game to see if something could not be done about the foxes. The Division sent its trapper for this neighborhood, Harold Willis of Morris Plains, who looked over the grounds, saw plenty of signs of foxes and promptly went to work. Within a very short time some 16 foxes, mostly greys, had been caught in his traps.

My next step was to communicate again with the Division of Fish and Game to learn what could be planted as food for the birds without at the same time being eaten by the deer. Again the Division responded promptly by sending George Howard, Assistant Wildlife Manager, of Pittstown. He looked over the property, consulted a soil map, made some suggestions for further clearing by cutting crossroads through the orchard, and later brought some

. . . Quail

plants and seeds. The plants were autumn olives, with which he said the Division was experimenting, and the seeds were the New Jersey game food patch mixture, which consisted of 11 different species of plants producing seed that pheasants and quail feed upon. All of these were planted in early June, 1958, with *Lespedeza bicolor var. natob* along the border of the field and Osage oranges in refuges that had not been plowed. The latter were my idea but it was found that this plant is difficult to transplant and many died.

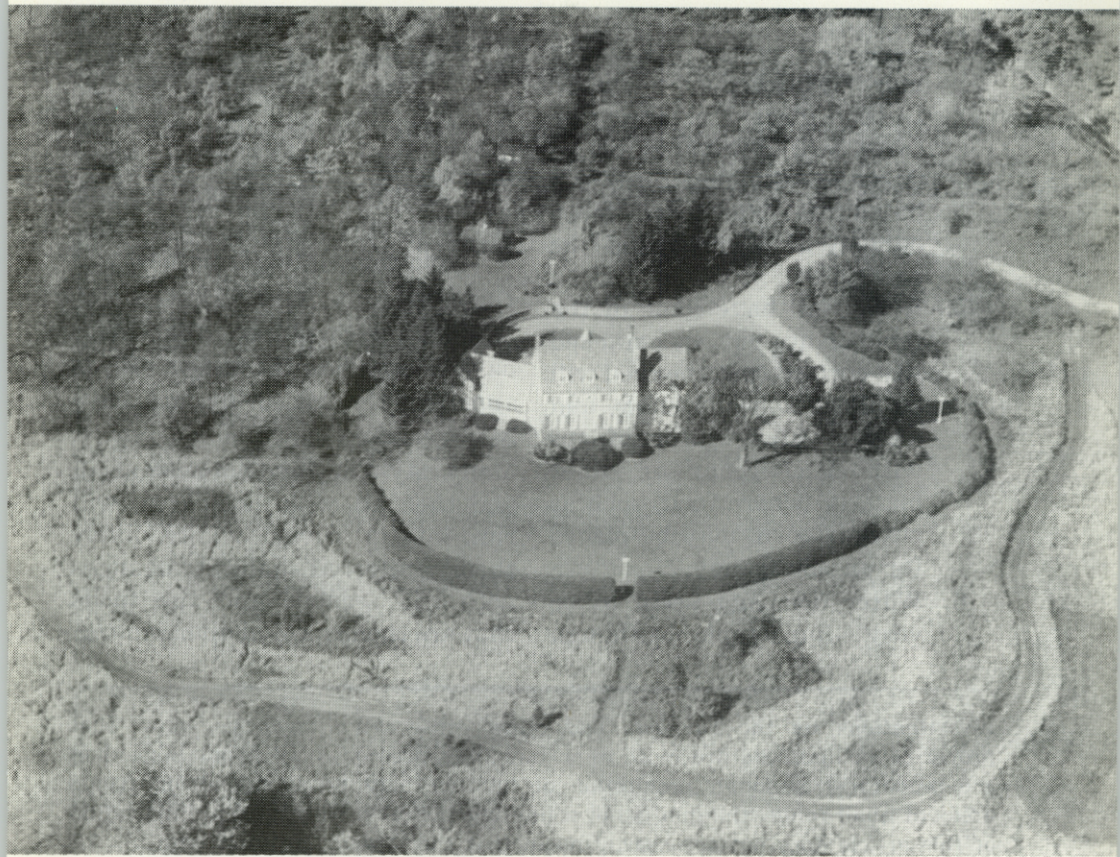
We may now turn to a bird's-eye picture of my property taken from an airplane by my son, Manuel dos Passos. This photograph shows most but not all of the planting. The house in the center is approached from the main highway, shown in the upper right-hand corner, by a winding driveway. To the north of the driveway is a straight road running from the highway to a garage, to the south of which is an aviary for exotic finches. All the dark area to the north of the house is the old orchard through which crossroads have been cut on the west side. To the south of the house, running off the driveway, is seen a narrow farm road. The dark patches are refuges that have not been plowed. On the right side of the picture may be seen an oblong, dark patch. This has been planted with multi-flora rose and eventually will make an excellent refuge as well as food

supply during the winter. The very light area is planted to the New Jersey food patch mixture. In the upper right, branching off the farm road to the left, is a strip of winter wheat which continues beyond the rose refuge. This will provide food in the late summer and early fall before the food patch mixture, which must be planted annually, is ripe. Around the edge of the field, not clearly visible because the plants are still small, is the eventual hedge of *Lespedeza* which is designed to provide winter food and shelter.

After the planting was completed and about August 15 I began releasing more quail. These were all young birds about 12 weeks old, because experience has taught me that old birds raised in captivity are nearly worthless due to their becoming too tame. Young birds, on the contrary, released at about 12 weeks of age became as wild as hawks in a very few days.

The birds released, or their offspring, are still around and have formed at least four coveys. Three of these were found on the opening day of the hunting season and the fourth was seen by a neighbor. These birds move from place to place very quickly and are strong fliers. There appears to be no reason why enough of the young birds should not survive, and produce conveys next year.

Thus far this experiment has given me two thrills. The first was in the early fall when looking out the window a cock, hen, and six chicks were seen on the lawn. The



Aerial view of the dos Possos home and quail project area

chicks were about the size of sparrows, probably five or six weeks old, and could fly fifteen or twenty feet when, in feeding, they fell behind their parents. The second thrill was experienced when on the opening day of the hunting season my Brittany spaniels, Babette and Coquette, found and pointed the three coveys mentioned. Of course, no birds were shot.

Experience is a great teacher, so for the benefit of those who may be interested in reintroducing quail I append a few hints:

1. Release northern birds and then only young birds about 12 weeks old.
2. Provide a hedgerow rose patch or some other refuge easily accessible to the birds.
3. Plant the New Jersey food mixture preferably in strips with the area in between left as it may be, or seeded to a cover crop such as clover.
4. Get rid of the foxes and keep after them. When we thought that they were all destroyed, for no signs were seen, Willis in short order caught three

. . . Quail

more! This is a matter never to be neglected because new foxes will always move in. Cats, when young birds are hatching, are even more dangerous and should be controlled.

5. In the fall have some of the food plants cut and stacked like corn so that the seed will be above a heavy snow, and arrange a few winter refuges with dead cedar or other material where food, such as cracked corn, may be placed for an emergency.
6. Water does not seem to be very important, although

there is a brook running through my swamp and a spring in the food patch has been turned into a small "frog pond." I do not know whether the birds use it. Probably they obtain sufficient moisture from dew and rain.

It is my experience that quail have a considerable range. Birds apparently released by me have been reported nearly a mile away. Many days they are not seen at all and then all of a sudden we will run into a covey. Quite likely their preferred habitat changes with the seasons and the foods that are then ripe and abundant. #

Investigations by the Division, and other conservation agencies, show that proper cover and food are more important influences on quail populations than are predators. Although prohibition of hunting may be significant in fringe areas of quail range, the gun is not a limiting factor in New Jersey. Publication of this article does not necessarily mean that the Division concurs with all the author's views. But, it does serve to show what cooperation and habitat improvement can do to improve game populations.

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COUNCIL HIGHLIGHTS

MARCH MEETING

The open session of the Fish and Game Council meeting was held at Hackettstown, on March 14. Those in attendance in addition to the Council, Director and Staff were the following:

Henry Schaefer, William Backus, Lester Godown, Lillian Godown, Roy H. Williams, Edward Jackson, and John Russack.

License Sales

Nearly final records show that the total receipts from licenses in 1960 were slightly more than in 1959. The significant point is that there is no general downward trend such as is being experienced in some of our neighboring states.

Waterfowl

Councilman Bohm stated that up until the freeze-up he felt we had more ducks in the state than ever before. Director Underhill stated that the midwinter inventory, while not a perfect one, is the only check we do have on each flyway. The inventory for the Atlantic Flyway showed a significant increase over 1959. However, the population did not reach the peak experienced in 1955, which was the highest year on the Atlantic Flyway since midwinter inventories were first run. He stated that many people feel that the Atlantic Flyway picture is somewhat distorted because of intermixing of birds from the Mississippi Flyway, south of Maryland. There is no question that there has been a decline in ducks raised in the pothole country. However, the ducks raised there are not the important ducks from Delaware and northern Maryland north. Many people feel that the general picture on waterfowl in the Northeast has not been showing the fluctuations that other parts of the country have that are dependent upon the potholes.

Chairman McCormick stated that he had received many requests for moving the season ahead. These came mainly from Salem County north to Burlington. The Director stated that if the Service will go along with zoning, i.e., putting the Delaware River counties from Salem north into the Pennsylvania season, this would help meet the problem of time variance in duck availability in different parts of the state. He agreed with Councilman Bohm that the Federal regulations are based too much on the feeling that the gun is the most important factor. By adhering to this, they are cutting the revenue needed to purchase and so save the breeding and wintering grounds which are actually the crux of the problem.

Fisheries Seminar

The Director called to the Council's attention that a Fisheries Management Seminar was scheduled to be held at the Fisheries Labor-

. . . Council Highlights

atory at Lebanon on March 22 and 23. This is an annual affair which Washington Federal Service representatives, Division Staff, and Council members attend. The various project leaders review their programs for the past year and hold joint discussions concerning accomplishments, and future plans.

Hunting Accidents

The Director stated that the Conservation Officers are following up on all hunting accidents to determine whether or not prosecution is warranted. This work will soon be completed and the Conservation Officers will be instructed to take all such cases to court and let the court decide whether or not there was negligence.

Little Beach Island

Little Beach Island, which adjoins the Brigantine National Wildlife Refuge and covers about 1,200 acres, has been acquired by the Philadelphia Conservationists and they have requested the Fish and Wildlife Service to take this over as part of the Brigantine Refuge. A hearing was set in Washington by the Migratory Bird Conservation Commission and Director Janzen asked Director Underhill to attend as ex-officio member of this commission. Acquisition of this additional piece would increase area available to hunters under the up-to-40% open-for-hunting-principle for such refuges.

A motion was made by Councilman Kelly, seconded by Councilman Lunsford, that the Council go on record as favoring the Little Beach Island acquisition. On the discussion of the motion, Councilman Heide stated that while he is in favor of land acquisition for hunting areas, he is definitely opposed to preserves, as such, in the State of New Jersey. Director Underhill stated that he agreed with Mr. Heide in principle, however, he feels when it has become a question of whether marshland is to be destroyed or preserved, it is to our advantage to go along with such a program. On raise of hands, eight voted in favor, two opposed, (Councilmen Heide and Frome) and the motion carried.

Councilman Cane

Councilman Cane stated that this was his final meeting, and that it had been a real privilege and honor to have served four years on the Council. It had been an education and a real opportunity to see what goes on in state government. He stated that the Chairman presented him with a heavy stick. He has never attempted to wield that for any one group and has always based his vote on what he thought was best for the citizens of New Jersey. While it may have gotten him in wrong a few times, he still feels that he has attempted to get the best hunting

for the most people at the least cost. He thanked the Council for the privilege of being associated with them and hoped that he would not be forgotten.

The Chairman stated that all of the Council was aware of the important contribution Mr. Cane has made, particularly at our Game Farms where he has worked very closely with Chief MacNamara. He cited the fact that the sexing of pheasants made a tremendous advance under his guidance, also certain innovations which have come about naturally through his association with poultry raising. The Council will miss him very much and hopes that he will feel that he is welcome to attend future Council meetings.

Councilman Heide

Councilman Heide stated that he would like to echo the sentiments expressed by Councilman Cane. It has been a privilege and honor to serve with the members of the Council, and he appreciated the cooperation of employees of the Division.

Councilman Heide brought to the Council's attention that through the efforts of the Bergen County Federation and the Citizens' Pollution

Chairman McCormick (right) bids best wishes to retiring Councilman Cane (left) and Councilman Heide (center)



Abatement Committee, the Bergen County Sewerage Authority had completed the trunk sewer and the Hackensack River has been almost 90% free of sewage. However, he feels that the Attorney General's office, the Department of Health and the Division of Fish and Game have not kept faith with them and have allowed eight or ten industries to pollute Overpeck Creek and the Hackensack River. He feels that it

. . . Council Highlights

is about time that something is done, since the people of Bergen County have spent millions of dollars to take care of their wastes.

There was considerable discussion on this matter, with the Director explaining the inadequacies of the Division's pollution law, the greater effectiveness of the Department of Health law in securing successful prosecutions, and the need for greater coordination of efforts between this Division, the Department of Health and the Attorney General's office.

The Director suggested that Commissioner Kandle of the Department of Health, and Commissioner Bontempo, meet with the Council at its next regular meeting, and discuss problems concerned with expediting a pollution cleanup. The Council agreed this should be done. The outgoing Councilmen were invited to sit in and have a voice in these discussions.

Chairman McCormick stated that the Council, as a body, is sorry to see Councilman Heide leave, and expressed the hope that he would continue his work with fish and game as he has always done in the past. He is always welcome to attend any Council meetings and the Council will always be interested in anything he has to say.

Gravel Operation

Councilman Sheppard stated that it may be well to keep an eye on the gravel removing operations in the South Branch of the Raritan below Packers Island Bridge. This will affect plans for the stocking program this year.

The Director stated that it was hoped to work out with the Highway Department modification of the gravel taking operation to give us a series of pools and riffles in the future, but while the operation is going on it will have a bad effect.

Blatnik Bill

The Director stated that Congress is currently supporting the Blatnik Bill. This bill is similar to the one which President Eisenhower vetoed last year. Basically, this will greatly increase federal grants to municipalities for the construction of pollution abatement facilities, elevate the status of the Pollution Abatement Unit of the Department of Health, Education and Welfare and contains certain other minor provisos. This had wide support among conservationists and members of congress and has a reasonably good chance of passing. #

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NEW JERSEY STATE FEDERATION OF SPORTSMEN'S CLUBS
Fourth Conservation Convention

CAMP OCKANICKON, MEDFORD LAKES—May 27 and 28

Theme: "Education and Legislation — Partners in Conservation"

SATURDAY—May 27

- 8:00 a.m. Registration and assignment to quarters of Federation Delegates.
10:00 a.m. Opening: Welcoming Address—Joseph L. Alampi, *Chairman*
Keynote Address—Edmond H. Shuler, *President*
Messages: Earl L. McCormick, *Chairman*, Fish and Game Council
Grant F. Walton, *State Soil Conservation Committee*
Carleton E. Heritage, *President*, State Farm Bureau
Franklin C. Nixon, *Master*, State Grange
David H. Hart, *Representative*, Commercial Fisheries
George G. Becker, *President*, Conservation Council
Everett G. Henderson, *President*, Pennsylvania Federation
Dr. Roscoe P. Kandle, *Commissioner*, Department of Health
12:00 Noon Lunch
1:00 p.m. Jules W. Marron, Sr., *Supervisor*, Public Relations
1:15 p.m. Frank E. Meloni, *Member*, General Assembly
1:30 p.m. Joseph Mills, *Third Place Winner*, Essay Contest
1:45 p.m. Dr. John D. Bulger, *National Wildlife Federation*
2:00 p.m. Thomas F. Connery, *State Senator*
2:15 p.m. Brian Morgan, *Second Place Winner*, Essay Contest
2:30 p.m. Dr. Earl E. Mosier, *Assistant Commissioner*, Education
2:45 p.m. Harrison A. Williams, *United States Senator*
3:15 p.m. Edwin R. Conklin, —*National Conference on Water Pollution*
3:30 p.m. Richard Gross—*Evaluation of Trout Stream Management*
7:00 p.m. Banquet—Jules W. Marron, *Toastmaster*,
Rose Marie Bryan, *First Place*, Essay Contest
William Richkus, "Raymond G. Wilson Award"
Address: Ross L. Leffler, *National Wildlife Federation*

SUNDAY—May 28

- 8:00 a.m. Breakfast
9:00 a.m. Church Services—Non-denominational
10:00 a.m. C. Richard Rogers, *Hunter Safety Report*
10:15 a.m. Amos Horrocks—*Aquatic Weed Control Program*
10:45 a.m. Harold M. Collins, *Representative*, Amchem Products, Inc.
11:00 a.m. Harold E. Wilson—*Wild Turkey Program*
11:15 a.m. Vice Presidents' Reports—Gilbert Ernest, North; Lester H. Godown,
Central; Anthony Ordille, South
11:45 a.m. Installation of State Officers for 1961-62. Jules W. Marron officiating
12:00 Noon Lunch
1:00 p.m. Open Forum—Voting on Resolutions. Conducted by New State President

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